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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,880	09/22/2003	Tatsuya Kobayashi	00684.003517	4251

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EXAMINER

CHEN, SOPHIA S

ART UNIT

PAPER NUMBER

2852

DATE MAILED: 10/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center">Office Action Summary</p>	Application No. 10/664,880	Applicant(s) KOBAYASHI ET AL.	
	Examiner Sophia S. Chen	Art Unit 2852	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-9 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/22/03 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/22/03, 10/7/03, and 11/10/03 (62)</u> | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
6) <input type="checkbox"/> Other: ____ |
|---|--|

DETAILED ACTION

Information Disclosure Statement

1. The Information Disclosure Statements filed on 9/22/03, 10/7/03, and 11/10/03 are considered by the Examiner.

Drawings

2. Figure 11 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 105 and 165 (Figure 11). Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to

obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The abstract of the disclosure is objected to because of the inclusion of legal phraseology, such as "said" (page 31, lines 5, 6, 7, 8, 10, and 11). Correction is required. See MPEP § 608.01(b).
5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
6. The disclosure is objected to because of the following informalities:
 - a. Page 8, line 7, "4 when" should be "When".
 - b. Page 13, line 19, "g f" should be "gf".
 - c. Page 17, line 4, "15°C10%" should be "10°C15%". (See Figure 5(a).)

Appropriate correction is required.

Claim Objections

7. Claims 3 and 4 are objected to because of the following informalities:
 - a. Claim 3, line 2, "said image bearing member" should be "said second image bearing member".
 - b. Claim 4, line 2, "said image bearing member" should be "said second image bearing member".

Appropriate correction is required.

Claim Rejections – 35 U.S.C. §102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1, 3, and 5-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Katayanagi et al. (US Pat. No. 6,529,695 B2)

The patent discloses an image forming apparatus comprising: a first image bearing member 2Y, 2M, 2C, or 2K for bearing a toner image; a second image bearing member 15 for bearing the toner image; a transfer member 6 opposed to the first image bearing member 2Y, 2M, 2C, or 2K with the second image bearing member 15 therebetween, wherein a voltage is applied to the transfer member 6 to transfer the toner image from the first image bearing member 2Y, 2M, 2C, or 2K on the second image bearing member 15 (column 4, line 63 to column 5, line 7 and Figure 1), and wherein a resistance R_t (10^5 to $10^9 \Omega\text{cm}$; column 5, lines 8-18) of the transfer member 6 and a resistance R_b (10^6 to $10^{12} \Omega\text{cm}$; column 4, lines 40-42) of the second image bearing member 15 satisfy $R_t / R_b \geq 1.0$.

The patent further discloses the transfer member 6 and the second image bearing member 15 having ionic electroconductivities (column 4, lines 42-48 and column 5, lines 8-18); the first image bearing member 2Y, 2M, 2C, or 2K being a

photosensitive member (column 3, line 57); the second image bearing member 15 being an intermediary transfer member (belt; column 4, lines 20-21); and the transfer member 6 being in the form of a roller (column 4, line 36 and Figure 1).

Claim Rejections – 35 U.S.C. §103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katayanagi et al. in view of Masuda et al. (US Pat. No. 6,175,712 B1).

Katayanagi et al., as discussed above, differs from the instant claimed invention in not disclosing the transfer member and the image bearing member having electronic electroconductivities.

Masuda et al. discloses an image forming apparatus comprising a first image bearing member (photosensitive drum) 1; a second image bearing member (intermediate transfer belt) 20b; a transfer roller opposed to the image bearing member 1 with the second image bearing member therebetween (Figure 2); and either ionic or electronic electroconductivities being added to an elastic layer (column 8, lines 42-46).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the elastic layer having electronic electroconductivities as taught by Masuda et al. in place of the transfer member and the second image bearing member having ionic electroconductivities of Katayanagi et al. because of the same functionality for adding conductivity to the elastic member.

Allowable Subject Matter

13. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other Prior Art

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Takeuchi et al. (US Pat. No. 5,953,572) discloses an image forming apparatus comprising a photosensitive member; an intermediate transfer belt having a volume resistivity of 10^{11} to 10^{16} ohm.cm; and a transfer roller having a volume resistivity of no more than 10^5 ohm.cm.

Ichinose et al. (US Pat. No. 6,070,047) discloses an image forming apparatus comprising a photosensitive member; an intermediate transfer belt having a medium resistance; and a transfer roller having a medium resistance of 10^5 to $10^{10} \Omega$.

Yano et al. (US Pat. No. 6,477,339 B1) discloses an image forming apparatus comprising a photosensitive member; an intermediate transfer belt being adjusted to $10^9 \Omega\text{cm}$ by added with ion conductive agent; and a transfer roller.

Takahata et al. (US Pat. Pub. No. US 2003/0077091 A1) discloses an image forming apparatus comprising a photosensitive member; an intermediate transfer belt; and a transfer roller.

Bessho et al. (US Pat. Pub. No. US 2003/0128999 A1) discloses an image forming apparatus comprising a photosensitive member; an intermediate transfer belt having a volume resistivity of 10^8 to $10^{16} \Omega\text{.cm}$; and a transfer roller having a volume resistivity of $10^5 \Omega\text{.cm}$ or lower.

Takahata et al. (JP 10-240042) discloses an image forming apparatus comprising a photosensitive member; an intermediate transfer belt; and a transfer roller having a resistance of 10^6 to $10^8 \Omega$.

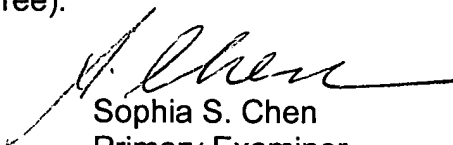
Handa et al. (JP 2000-056587) discloses an image forming apparatus comprising a photosensitive member; an ion conductive type intermediate transfer belt; and a transfer roller.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sophia S. Chen whose telephone number is (703) 308-7617. The examiner can normally be reached on M-F (7:00-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (703) 308-1373. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sophia S. Chen
Primary Examiner
Art Unit 2852

Ssc
October 7, 2004